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Accounting Inconsistency and Debt Contracting

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To the Graduate Council:

I am submitting herewith a dissertation written by Fellipe Gomes Raymundo entitled "Accounting Inconsistency and Debt Contracting." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Business Administration.

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Accounting Inconsistency and Debt Contracting

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Dedication

This dissertation is dedicated to my wife, Thalita Louise de Souza Santos, and my son, Antonio Santos Raymundo. I would not have achieved this important milestone in my life without your unconditional love, support, and encouragement.

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Abstract

In this study, I examine whether information frictions associated with changes in accounting policies (i.e., accounting inconsistency) impact debt contracting. I argue and provide evidence that firms with higher accounting inconsistency are more likely to obtain private (versus public) debt because private lenders are better able to mitigate information asymmetry. Additional analyses suggest that this result is driven by discretionary accounting changes as opposed to changes related to new accounting standards. Furthermore, I show that the association between accounting policy changes and debt placement decisions is concentrated among firms adopting accounting policies that are less consistent with those implemented by their industry peers. Consistent with the conjecture that accounting policy changes increase the information asymmetry between borrowers and potential lenders, I find that accounting inconsistency is associated with disagreement among credit rating agencies and affects the loan syndication process. Finally, I provide evidence that lenders adjust the credit terms (i.e., cost and amount of debt) in response to changes in accounting policies. Collectively, these findings add to the literature that examines the importance of financial reporting attributes for debt contracting.

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1. Introduction

Regulators and standard setters argue that accounting consistency is an important attribute of financial reporting because it enhances the usefulness of the financial statements.[1] For example, the FASB's Accounting Standards Codification (ASC) Topic 250 states "the consistent use of the same accounting principle from one accounting period to another enhances the utility of financial statements for users by facilitating analysis and understanding of comparative accounting data" (FASB 2018).[2] Prior research suggests that changes in accounting policies lead to higher information asymmetry because they reduce investors' ability to distinguish between changes in the firm's underlying economic performance and changes in the accounting system that measures this performance (Brown 1983; Dharan and Lev 1993; Peterson, Schmardebeck, and Wilks 2015). Moreover, it is not clear to financial statement users whether managers adopt new accounting policies to improve the measurement of the firm's economic transactions or to obfuscate a potential decline in the firm's underlying performance.

Prior studies suggest that private lenders, such as banks, are better able to mitigate information asymmetry than public lenders, such as bondholders, because of comparative advantages which include access to material nonpublic information (Fama 1985; Bhattacharya and Chisea 1995) and superior monitoring ability (Diamond 1984, 1991). As a result, borrowers with higher information asymmetry face lower adverse selection costs in the private debt market (Campbell and Kracaw 1980; James 1987; Bolton and Freixas 2000).

Because accounting inconsistency increases information asymmetry between firms and

[1] The Financial Accounting Standards Board (FASB) defines accounting consistency as "the use of the same methods for the same items, either from period to period within a reporting entity or in a single period across entities" (FASB 2010). In this study, unless stated otherwise, the term "accounting consistency" refers to consistency between two consecutive fiscal years for a given firm.

[2] Moreover, the U.S. Securities and Exchange Commission (SEC) highlights the importance of accounting consistency in promoting the confidence of market participants and in maintaining fair and efficient capital markets (SEC 2014).

capital market participants, in this study, I examine the association between changes in accounting policies and future (i.e., one-year-ahead) debt contracting outcomes. Because private lenders can better mitigate information frictions, relative to public lenders, I investigate whether changes in accounting policies impact whether firms access private or public debt markets, as well as the terms of the resulting debt contracts. Although private lenders can use private information to overcome the information asymmetries associated with accounting changes, it is not clear *ex-ante* whether accounting inconsistency impacts firms' financing decisions because, on average, participants in the public debt market might not consider accounting policy changes to be relevant for debt contracting. Understanding how accounting inconsistency affects potential lenders is important because debt financing is a significant component of many firms' capital structures and because firms must choose between a variety of types and sources of debt (Rauh and Sufi 2010; Colla, Ippolito, and Li 2013).

To examine the association between accounting inconsistency and the choice to access the private or the public debt market, I follow prior literature and investigate the incremental financing decisions of U.S. firms (Bharath, Sunder, and Sunder 2008; Dhaliwal, Khurana, and Pereira 2011). I use the measure developed by Peterson et al. (2015) to proxy for accounting inconsistency. This measure captures the extent to which the accounting policies implemented by a given firm vary from one year to the next.[3] Using a sample of 8,166 bank loans and bond issuances from 1996 through 2013, I find that firms with higher accounting inconsistency are more likely to obtain external financing from the private rather than the public debt market. My models include controls

[3] Specifically, Peterson et al. (2015) rely on the vector space model to measure the textual similarity of significant accounting policies disclosed in the footnotes of 10-K filings. They construct a measure of accounting consistency that varies between 0 and 1, inclusive, with higher values indicating a more consistent application of accounting policies across years. My measure of accounting inconsistency (*Acct_Inconsistency*) equals one minus the consistency measure from Peterson et al. (2015). Thus, higher values of *Acct_Inconsistency* indicate that the firm's accounting policies are less consistent in the current year relative to the preceding year.

for determinants of the debt placement decision identified in prior studies, including accruals quality (Bharath et al. 2008). Thus, the effect of accounting inconsistency is incremental to the effect of accruals quality. I also control for changes in the firm's underlying business and transactions. Finally, the economic magnitude of the effect of accounting inconsistency on the borrowing decision is comparable to that of other important determinants, including asset tangibility, financial leverage, and default risk.

The accounting inconsistency measure from Peterson et al. (2015) captures changes in the significant accounting policy disclosures from one year to the next. However, these changes could occur for different reasons. For example, firms could implement different accounting policies due to the announcement of an Accounting Standard Update (ASU) from the FASB or could decide to voluntarily switch to an alternative, acceptable accounting principle (e.g., an alternative revenue recognition method). Because standard-level accounting changes and discretionary accounting changes might differ in terms of their impact on a firm's information environment, I also examine whether the association between accounting inconsistency and a firm's borrowing choice varies with the type of accounting change. I find that firms with higher discretionary changes are more likely to borrow from banks (versus issuing public debt), whereas firms with higher standard-level changes do not appear to prefer one debt market over the other. These results are consistent with the view that only accounting policy changes driven by managerial discretion are associated with frictions in the firm's information environment.

According to regulators and standard setters, the benefits of accounting consistency involve not only the consistent implementation of accounting policies within a firm over time, but also the extent to which a firm adopts accounting policies that are similar to those used by its peers.[4]

[4] Some firms change accounting policies to conform to policies used by their industry peers. For example, in the footnotes of the 10-K filed for the fiscal period ending on February, 2009, Constellation Brands discloses a change in

Therefore, I examine whether the association between accounting inconsistency and a firm's debt placement decisions depends on the similarity of its accounting policies and those of firms operating in the same industry. I find that the effect of accounting changes on the likelihood of borrowing from a bank versus issuing bonds is concentrated among firms with accounting policies that are less consistent with those used by their peers.

Because prior studies suggest that increased comparability is associated with lower information processing costs (De Franco, Kothari, and Verdi 2011; Peterson et al. 2015), I test whether the association between accounting inconsistency and the decision to access the private or the public debt market varies between firms that converge to the same accounting policies used by their industry peers and those that diverge from the accounting policies used by their industry peers. I find that the positive association between accounting inconsistency and the choice to raise bank debt rather than public debt is driven by firms that increase their accounting dissimilarity with respect to their peers.

The results presented so far are consistent with the conjecture that firms with higher accounting inconsistency prefer to access the private debt market as opposed to the public debt market because financial intermediaries such as banks are better at dealing with the information frictions associated with the accounting policy changes than are arm's length lenders such as bondholders. I conduct two analyses to directly test this channel. First, I use a sample of bond issuances with credit ratings available at the offering date from both Moody's and Standard & Poor's (S&P) and show that higher accounting inconsistency is positively associated with the frequency and magnitude of bond rating disagreement (i.e., split ratings). Second, using a

the method of inventory valuation from last in, first out (LIFO) to first in, first out (FIFO), and highlights the improved financial comparability as a primary reason for the change. Specifically, the firm states that "the FIFO method of accounting will provide improved financial comparability to other publicly-traded companies in the industry". The 10-K filing is available at https://www.sec.gov/Archives/edgar/data/16918/0000016918-99-000008-index.html.

subsample of syndicated loans, I provide some evidence that accounting inconsistency, and in particular, the portion related to discretionary accounting changes, affects the loan syndication process as well as the structure of the loan syndicate. Collectively, these findings suggest that accounting inconsistency affects the information asymmetry between the parties involved in the debt contracting process.

In additional analyses, I examine whether accounting inconsistency is associated with *ex-ante* debt contract terms (i.e., the cost and the amount of debt). The results suggest that firms with higher accounting inconsistency pay higher interest spreads in the public market markets, and face credit rationing in both markets. Furthermore, I investigate whether firms with higher accounting inconsistency are also more likely to raise non-bank private debt relative to public debt. Using a sample of private placements, I find evidence consistent with the view that firms implementing inconsistent accounting policies prefer both bank and non-bank private debt over public debt.

This study provides several contributions to the literature. Prior research shows that accounting quality (Bharath et al. 2008), disclosure quality (Dhaliwal et al. 2011), and financial statement complexity (Chakraborty, Leone, Minutti-Meza, and Phillips 2018) are associated with the source of debt financing and the design of debt contracts. In a review of the literature on the role of accounting information in debt contracting, Armstrong, Guay, and Weber (2010, p.227) state "we currently know comparatively little about which attributes of the accounting system are most valuable to lenders" and they call for more research on the characteristics of the financial reporting process that are relevant for capital providers. This study answers Amstrong et al.'s call by documenting a relation between accounting consistency and firms' debt outcomes.

Moreover, to the extent that accounting consistency reflects the combination of several accounting choices that a firm makes for a given fiscal period, this study also answers a call from

Fields, Lys, and Vincent (2001) for additional research on the economic implications of accounting choices. Although several studies investigate the consequences of accounting choices for the equity market (e.g., Ball 1972; Harrison 1977; Brown 1983; Dharan and Lev 1993), the literature on debt-related outcomes is somewhat sparse.[5] This study adds to this stream of the literature by examining how accounting policy changes affect debt contracting.

Finally, because it provides some evidence on how accounting inconsistency between a firm and its industry peers mediates the relation between accounting inconsistency and debt placement decisions, my study also complements prior research examining the benefits of financial statement comparability across peer firms (e.g., De Franco et al. 2011; Kim, Kraft, and Ryan 2013; Choi, Choi, Myers, and Ziebart 2019).

The remainder of the paper is organized as follows. Section 2 reviews the prior literature and develops my hypothesis. Section 3 details the sample composition, explains the construction of the main variables, and outlines the research design. Section 4 presents the main results, and Section 5 discusses some additional analyses. Section 6 provides robustness tests. Section 7 concludes.

[5] Harrison and Grudnitski (1987) and Beatty, Ramesh, and Webber (2002) are notable exceptions. The former study shows that income-increasing discretionary accounting changes are associated with negative reactions from bondholders, and the latter study finds that firms pay higher interest rates when debt contracts allow them flexibility to change their accounting policies.

2. Prior Literature and Hypothesis Development

2.1. Prior Literature

This study examines the relation between accounting inconsistency and firms' decision to access the private or the public debt market. In other words, it investigates the extent to which the inconsistent implementation of accounting policies for a given firm from one fiscal period to the next is associated with debt contracting. Therefore, it is related to the stream of the literature on changes in accounting policies. Early studies provide descriptive evidence on the types of accounting changes and the magnitude of their effect on net income (Archibald 1967; Cushing 1969; Frishkoff 1970). These studies indicate that income-increasing accounting changes are more frequent than those that reduce earnings.

To better understand the motivation underlying these decisions, researchers investigate the determinants of changes in accounting policies. Gosman (1973) finds a positive association between firm size and accounting changes, and Bremser (1975) shows that firms with poor economic performance are more likely to make accounting changes. Other firm characteristics that have been examined by prior studies include industry association, the presence of extraordinary items and long-term stock return (Warren 1977; Lilien, Mellman, and Pastena 1988).

Positive accounting theory (Watts and Zimmerman 1978, 1986) posits that the use of accounting information enhances contracting efficiency, and thus suggests that certain contracts (e.g., compensation contracts, debt contracts) might help to explain firm's accounting choices. For example, the existence of compensation contracts with bonus payments determined by the achievement of some benchmarks could provide an incentive for managers to choose certain accounting policies in an opportunistic manner. While prior research suggests that managers adopt accounting changes to smooth income (Moses 1987; Elliott and Philbrick 1990), most studies do

not find support for the hypothesis that compensation contracts explain voluntary accounting changes (Holthausen 1981; Hunt 1985). A possible explanation for this finding is that the accounting policies examined in those studies (e.g., changes in the depreciation method and inventory valuation) do not have a significant effect on executive compensation (Abdel-Khalik 1985; Healy, Kang, and Palepu 1987).

Similarly, the presence of accounting covenants in debt contracts is also considered a determinant of accounting choices since managers of firms approaching covenant violations have incentives to make income-increasing accounting changes to avoid the costs associated with adverse credit events (e.g., technical default, renegotiations). Several studies find evidence consistent with the hypothesis that firms implement income increasing accounting changes to avoid costly debt covenant violations (Sweeney 1994; DeAngelo, DeAngelo, and Skinner 1994).[6]

2.2. Hypothesis Development

Prior research shows that accounting inconsistency has a negative effect on firms' information environment. For example, Peterson et al. (2015) investigate the association between accounting consistency and information asymmetry. Their findings suggest that lower accounting consistency reduces investors' ability to distinguish between changes in the firm's underlying economic performance and changes in the accounting system that measures this performance. Similarly, evidence from studies examining the properties of analysts' forecasts suggest that changes in accounting policies are negatively associated with the quality of a firm's information environment. Specifically, Brown (1983) finds that analysts issue forecasts with lower accuracy in the year following voluntary actuarial changes for pensions. Using a sample of mandatory and voluntary accounting changes, Wang (2018) shows that both types of changes are negatively

[6] A notable exception is Holthausen (1981). His findings suggest that the presence of debt covenants is not associated with firm's decision to switch from the accelerated to the straight-line depreciation method.

associated with analysts' forecast accuracy and positively associated with forecast dispersion. Collectively, these findings are consistent with the view that accounting inconsistency reduces the ability of market participants to estimate future performance using public information, thus increasing the uncertainty about the timing and amount of firms' future cash flows.

A large body of theoretical and empirical work examines capital structure decisions (i.e., the choice between issuing debt or equity) (Frank and Goyal 2009).[7] Debt is an important source of capital for U.S. firms and they often use different types of debt in their capital structure. For example, in 2017, U.S. firms issued $1,798 billion of bonds and obtained $2,410 billion from syndicated loans, while the amount of new equity raised in the same period was $143 billion (Board of Governors of the Federal Reserve System 2018; Thomson Reuter's Loan Pricing Corporation (LPC)). As a result, recent empirical studies investigate the determinants of debt structure (Rauh and Sufi 2010; Colla et al. 2013).

Information asymmetry between firms and capital providers affects corporate financing decisions (Myers and Majluf 1984) and the existence of significant institutional differences across types of debt market participants helps to explain this result. Specifically, prior theoretical research posits that, in the presence of asymmetric information, private lenders are better able to evaluate borrowers than other potential lenders (e.g., arm's length lenders such as bondholders). Their comparative advantages include access to material nonpublic information related to the borrowers (Fama 1985; Bhattacharya and Chiesa 1995), superior information production and processing ability (Campbell and Kracaw 1980; Boyd and Prescott 1986), and greater incentives to effectively

[7] Please see Graham and Leary (2011) for a comprehensive review of the literature on capital structure.

monitor borrowers *ex post* (Diamond 1984, 1991).[8, 9] As a result, *ceteris paribus*, borrowers with poor information environment are expected to face lower adverse selection costs when borrowing from private lenders, which enables them to obtain better contracting terms relative to arm's length financing (James 1987).[10]

Prior research shows that accounting information plays an important role in debt contracting (Armstrong et al. 2010; Christensen, Nikolaev, and Wittenberg-Moerman 2016). For example, Bharath et al. (2008) investigate whether firms' accounting quality (measured using discretionary accruals) affect their choice to access the private or the public market and the design of the debt contracts. Consistent with the view that banks are better equipped to deal with information asymmetries between the contracting parties, they find that firms with higher discretionary accruals are more likely to borrow privately than to issue bonds. Similarly, I posit that the inconsistent implementation of accounting policies affects the information asymmetry between borrowers and lenders and influences firms' borrowing decisions (i.e., choice of debt source). Specifically, I argue that private lenders are better able to mitigate information frictions associated with accounting inconsistency due to the institutional differences that exist between them and public lenders. Thus, my hypothesis, stated in the alternative form is:

[8] Unlike public lenders, private lenders are not subject to the disclosure restrictions imposed by Regulation Fair Disclosure (FD). Therefore, they have access to managers and they might obtain material nonpublic information from borrowers.

[9] Recent empirical work identify specific mechanisms trough which private lenders use such competitive advantages. For example, Carrisoza and Ryan (2017) show that some covenants in private debt contracts require borrowers to provide lenders with projected financial statements for future periods and monthly historical financial statements (i.e., accounting-related nonpublic information). Furthermore, Minnis and Sutherland (2017) provide evidence that banks use alternative information sources (e.g., tax returns) to improve loan monitoring.

[10] Importantly, Rajan (1992) argues that, under certain conditions, the informational advantage of banks over other lenders might lead them to extract rents from the borrowers, which would represent an additional cost for this type of credit. However, bank financing should still be attractive to borrowers when its benefits (e.g., lower adverse selection) outweigh its cost (e.g., rent extraction).

H1: *Firms with higher accounting inconsistency are more likely to obtain private debt (i.e., bank loans) than public debt (i.e., bonds).*

3. Research Design

3.1. Accounting Inconsistency

Peterson et al. (2015) develop two measures of accounting consistency based on the textual similarity of significant accounting policies disclosed in the footnotes of 10-K filings. First, they create a time series measure that captures the similarity of the accounting policies disclosed by a given firm in two consecutive years (e.g., year *t* and year *t-1*). Next, they construct a cross-sectional measure that reflects the average similarity of a firm's accounting policy disclosures to those from its peers (i.e., other firms operating in the same two-digit SIC group) for a given point in time (e.g., year *t*). Because the main purpose of this study is to examine the effects of consistent use of accounting policies within the same firm over time on the choice between private and public debt, I provide a brief description of the construction of their time-series measure.[11,12]

Peterson et al. (2015) use the vector space model from Salton, Wong, and Yang (1975) to compare the similarity between two documents.[13] The measure is obtained in three steps. First, the authors remove stop words and stem the remaining words.[14] Next, the vector space model identifies the unique words in a text string and converts them into a vector. Each element of the vector is an integer variable set equal to 1 if the word appears in the text string, and 0 if it is missing. Finally, the authors measure the similarity of two strings of text using the cosine of the angle between the two vectors. The variable ranges from 0 to 1 where a value of 0 indicates that the texts have no words in common, and a value of 1 reflects two identical text strings. To facilitate the interpretation of the coefficients, I transform their measure of accounting consistency into one

[11] Please see Peterson et al. (2015, p. 2489 – 2490) for a more detailed explanation of the variable construction.
[12] In section 4.2, I use their cross-sectional measure to examine the extent to which the association between accounting inconsistency and the firm's choice of debt depends on the level of accounting inconsistency across firms.
[13] Other studies in the accounting and finance literature that also implement this technique to measure textual similarity include Hoberg and Phillips (2010), Brown and Tucker (2011), and Brown, Tian, and Tucker (2018).
[14] Examples of stop words include "and", "the", or "that". Stemming involves the removal of suffixes to obtain root words.

that captures accounting inconsistency (*Acct_Inconsistency*) by subtracting one from it. Therefore, higher values of *Acct_Inconsistency* indicate more inconsistent accounting policies from one year to the next.[15,16]

3.2.Baseline Model

To investigate the relation between accounting inconsistency and the choice between accessing the private or the public debt market, I follow prior literature on the determinants of the source of debt and use the incremental borrowing approach (Denis and Mihov 2003; Bharath et al. 2008; Dhaliwal et al. 2011; Florou and Kosi 2015). Specifically, I estimate the following Probit model:

$$\Pr\left(Private_{i,t}\right) = \Phi(\beta_1 Acct\_Inconsistency_{i,t-1} + \gamma \boldsymbol{X}_{i,t-1} + \varepsilon_{i,t})$$

where $Private_{i,t}$ is an indicator variable set equal to one if firm *i* obtains a bank loan in year *t*, and zero if firm *i* issues a public bond in year *t*, and $Acct\_Inconsistency_{i,t-1}$ is the transformed measure of accounting consistency from Peterson et al. (2015) for the year *t-1*. A positive and significant coefficient on $Acct\_Inconsistency_{i,t-1}$ (β_1) indicates that firms with higher accounting inconsistency are more likely to borrow from banks than to issue public bonds.

$\mathbf{X}_{i,t-1}$ denotes a vector of firm-level control variables that have been shown in the prior literature to be associated with the firm's decision to access the private or the public debt market

[15] Peterson et al. (2015) conduct some tests to validate their measure of accounting consistency and the results indicate that it captures changes in accounting policies from one year to the next. To further alleviate concerns related to the construct validity of this measure, I follow Peterson et al. (2018) and conduct two additional validation tests using my main sample. First, I examine the association between *Acct_Inconsistency* and the likelihood that a firm receives a preferability letter from its auditor. Next, I investigate whether the auditors are more likely to include an explanatory paragraph related to accounting changes in the audit report for firms with higher accounting inconsistency. In both tests, I find a positive and statistically significant coefficient on *Acct_Inconsistency* which suggests that the measure captures the construct of accounting inconsistency.

[16] In untabulated tests, I find that my inferences are robust to the use of an alternative measure of accounting inconsistency (i.e., an output-based measure) developed by Wang (2018).

(Bharath et al. 2008; Cheng 2017).[17] In particular, following Bharath et al. (2008), the list of covariates include firm size, market-to-book ratio, default risk, asset tangibility (i.e, the proportion of fixed assets to total assets), financial leverage, access to capital markets, and accruals quality. All variables are described in detail in Appendix A.

Because accounting inconsistency can be related to changes in the firm's business environment (e.g., new products or services, divestiture of an operating segment), I include a proxy for economic inconsistency to control for changes in the underlying economic transactions from one year to the next.[18] Furthermore, I control for mergers and acquisitions (M&A) activity. Therefore, the effect of accounting inconsistency on firms' debt placement decisions, captured by the coefficient β_1, should be interpreted as being incremental to changes in the underlying economics of the firm. I also control for the quality of the firms' information environment (i.e., number of analysts following) and their financial reporting complexity (Chakraborty et al. 2018). Finally, in all model specifications, I include industry and year fixed effects, and cluster standard errors by firm.

3.3. Sample Selection and Descriptive Statistics

To examine the association between accounting inconsistency and firms' choice between raising private or public debt, I follow Bharath et al. (2008) and construct a sample of bank loans and bonds issued by U.S. firms. I obtain bank loan data from Thomson Reuters' Loan Pricing Corporation (LPC) Dealscan, which offers information related to loan pricing as well as other contract terms (e.g., issue date, amount, maturity, collateral). Thomson Reuters collects the data from SEC filings and public documents (10Ks, 10Qs, 8Ks, and registration statements), lead

[17] For each debt issue, I use the most recent 10-K (i.e., filed in the fiscal year before the issue date) to calculate the control variables.

[18] This measure of economic inconsistency is based on the textual similarity of the firm's business description sections obtained from 10-K filings.

arrangers in loan syndicates as well as other internal sources. The data on Dealscan are organized by package and by facility. A package is a financial contract signed between a borrower and a lender (or group of lenders) at a particular date. Some packages might involve multiple 'facilities' (e.g., term loans, revolver, a line of credit). Because loan characteristics (e.g., spread, maturity, purpose) vary across the facilities, I follow prior literature and treat each facility as a separate observation (Bharath et al. 2008; Cheng 2017).[19] Moreover, in line with Bharath et al. (2008), I retain only term loans, revolvers, and 364-day facilities. Finally, all loans included in the sample are senior in terms of the firm's overall debt structure and have non-missing interest rate spread, amount and maturity.

Data on corporate bonds are obtained from Mergent's Fixed Income Securities Database (FISD). Following prior studies (Bharath et al. 2008; Florou and Kosi 2015), I exclude convertible bonds, bonds with callable features and bonds issued via private placements.[20] Furthermore, only public bonds with available data on yield spread, amount and maturity are included in the sample.

I collect financial and accounting data from Compustat-CRSP merged and analysts' forecasts data from IBES. I merge this data with the sample obtained from Dealscan and FISD as of the fiscal year ending prior to the issue date of the bank loan or bond. Due to the data availability of the accounting inconsistency measure from Peterson et al. (2015), the sample period is from 1996 through 2013.[21] After excluding debt issued by utilities (SIC 4900-4999) and financial

[19] To alleviate concerns related to the inclusion of repetitive observations, I conduct a robustness test using only the facility with the largest loan amount in packages with multiple facilities (i.e., package-level sample) (Ivashina 2009). The results are presented in Table 10 and are similar to those obtained using the facility-level sample.

[20] In an additional analysis discussed in section 5.2, I use a sample of private placement debt issues (e.g., Rule 144A debt issues) to examine the association between accounting inconsistency and the choice between bank debt, non-bank private debt, and public debt.

[21] Even though the 10-K filings are available in EDGAR from 1994 onwards, the time series measure from Peterson et al. (2015) requires two years of data (i.e., year *t* and year *t-1*). Thus, it is available since 1995. The consistency measure from Peterson et al. (2015) is available through 2012.

institutions (SIC 6000-6999), the final sample consists of 8,166 debt issues from 1,950 unique firms of which 7,137 are bank loans and 1,029 are public bonds.

Table 1, Panel A presents the descriptive statistics for the variables used in the main analyses. All continuous variables are winsorized at their 1st and 99th percentiles.[22] Overall, the distribution of the variables is consistent with those observed in prior studies (Bharath et al. 2008; Cheng 2017; Peterson et al. 2018). Table 1, Panel B, provides summary statistics for firms with low accounting inconsistency (i.e., bottom tercile of *Acct_Inconsistency*) and firms with high accounting inconsistency (i.e., top tercile of *Acct_Inconsistency*). It also reports t-tests for the difference in means between the two groups. Consistent with H1, relative to firms with lower accounting inconsistency, firms with higher accounting inconsistency are more likely to borrow from banks than to issue public bonds as indicated by the positive and statistically significant difference in *Private*. However, several other firm characteristics presented in Panel B, including the proxy for economic inconsistency, are also significantly different across the two groups which reinforce the importance of including them as covariates in the multivariate tests.

[22] All tables referenced in this study are reported in Appendix B.

4. Empirical Results

4.1. Accounting Inconsistency and the Choice Between Bank Loans and Bonds

Table 2 shows the results for the regression that examines the association between accounting inconsistency and firms' borrowing decisions. Consistent with the hypothesis that firms with higher accounting inconsistency are more likely to obtain bank loans than to issue public bonds, results reported in Column (1) show that the coefficient on *Acct_Inconsistency* is positive and statistically significant (p-value < 0.05). The marginal effect of 0.17 indicates that a one standard deviation increase in *Acct_Inconsistency* is associated with a 1.0 (0.17*0.06) percentage point increase in the likelihood of raising bank debt. Importantly, the economic magnitude of this effect is similar to that of other determinants of the source of debt financing. Specifically, a one standard deviation decrease in *MTB* and *Tangibility* is associated with an increase in the likelihood of obtaining a bank loan of 1.3 and 1.8 percentage points, respectively. Similarly, an increase of one standard deviation in *Default Risk* (*Leverage*) is associated with a 5.1 (2.1) percentage points increase in the probability of accessing the private debt market.

To mitigate the concerns that multiple observations within the same firm-year could introduce some bias to the test statistics and drive the results reported in column (1), I follow Florou and Kosi (2015) and create a continuous dependent variable (*Pct. Private*$_{i,t}$) that reflects the ratio of the amount of bank debt to the amount of total debt (i.e., bank loans plus public bonds) issued by firm *i* in year *t*.[23] The results of this firm-level analysis are presented in column (2). Consistent with the debt-issue level analysis reported in column (1), the positive and statistically significant (p-value < 0.05) coefficient on *Acct_Inconsistency* indicates that accounting

[23] Specifically, *Pct. Private*$_{i,t}$ is a variable that can take values between zero and one. It equals zero for firms that issues only public bonds in a given year, and equals one for firms that only raises bank debt in a given year. Because the variable is double-censored (i.e., lower bound of 0 and upper bound of 1), I re-estimate this regression using a Tobit model and tabulate the result in Table 10. The results remain unchanged using this alternative estimator.

inconsistency is positively associated with the amount of debt obtained from the private debt market.

4.2. Discretionary Inconsistency, Standard-level Inconsistency and the Source of Debt

Accounting inconsistency captures differences in the firm's significant accounting policies from one year to the next. Firms implement accounting policy changes for two main reasons. First, the FASB regularly issues codification updates that require firms to change their accounting policies. To the extent that these changes are driven by standard-setters and affect a wide range of public firms, they are classified as standard-level changes. Second, given that the continued use of the same accounting policy might be sub-optimal when there is a change in the underlying circumstances, standard setters confer managers with some level of discretion with respect to the accounting policy choice. Specifically, managers can switch from one acceptable policy to another as long as the new one is preferable under the current circumstances. Because these changes are a product of managerial discretion, they are classified as discretionary accounting changes.

Since information frictions associated with accounting inconsistency are expected to differ according to the type of accounting policy change, I examine whether the effect of accounting inconsistency on firms' borrowing decisions varies between standard-level and discretionary accounting changes. To do that, I follow Peterson et al. (2018) and disaggregate the accounting inconsistency measure into two components by regressing *Acct_Inconsistency* on industry-year fixed effects (i.e., interactions between indicator variables for each two-digit SIC group and year in the sample). The measure of standard-level changes (*Stnd_Inconsistency*) is the portion of *Acct_Inconsistency* explained by specific industry and year factors (i.e., predicted values), while the proxy for discretionary accounting policy changes (*Disc_Inconsistency*) is defined as the unexplained portion (i.e., residuals) of *Acct_Inconsistency*.

Importantly, this disaggregation relies on the assumption that updates to the accounting standards are issued to target specific industries (or groups of industries) and, in the case of updates related to general transactions, that they promote more changes in certain industries relative to the others. Related to the former, several ASUs issued by the FASB are in fact industry-specific. Examples include ASU 2009-14, Software: Certain Revenue Arrangements That Include Software Elements; ASU 2010-26, Entertainment—Casinos: Accruals for Casino Jackpot Liabilities; and ASU 2012-07, Entertainment—Films: Accounting for Fair Value Information That Arises after the Measurement Date and Its Inclusion in the Impairment Analysis of Unamortized Film Costs. Moreover, anecdotal evidence from practitioners suggests that some industries are indeed more impacted by ASUs related to broader issues. For example, firms operating in aerospace and defense, automotive, telecommunications, media and entertainment, engineering and construction, pharmaceuticals, and technology industries are expected to implement more changes following ASU 2014-09: Revenue from Contracts with Customers (PwC 2018), while retailers, wholesalers, and distributors are likely to be more affected by ASU 2016-02, Leases (Deloitte 2018). Collectively, these facts help to alleviate concerns related to the plausibility of this assumption.

Table 3 reports the results using the more granular measures of accounting inconsistency. Column (1) presents the results of the issue-level analysis and column (2) presents the results of the firm-level analysis. In both models, the coefficient on *Disc_Inconsistency* is positive and statistically significant (p-value < 0.05), while the coefficients on *Stnd_Inconsistency* are not significant at the conventional levels. These findings are consistent with the view that accounting changes resulting from managerial discretion affects the information asymmetry between borrowers and lenders and thus impact the firms' borrowing decision.

4.3. Cross-sectional Tests: Effects of Accounting Inconsistency Across Firms

Regulators and standard setters argue that the benefits of accounting consistency arise from both the consistent implementation of accounting policies within-firm over time, and from the extent to which a firm adopts accounting policies that are similar to those observed in its peers (i.e., financial statement comparability). Specifically, the FASB states that "information about a reporting entity is more useful if it can be compared with similar information about other entities" (FASB 2010). Consistent with that, a large body of empirical work document benefits associated with financial statement comparability across firms (De Franco et al. 2011; Kim et al. 2013; Peterson et al. 2015; Choi et al. 2019).

Prior research shows that comparability benefits debt market participants because it facilitates the assessment of credit risk. Specifically, Kim et al. (2013) find that comparability reduces information asymmetry among bond traders, and Hoitash, Hoitash, Kurt and Verdi (2018) suggest that balance sheet comparability is particularly useful for credit risk analysis. Taken together, these findings suggest that financial statement comparability affects the information processing of debt market participants. Therefore, I examine whether the association between accounting inconsistency and firms' borrowing decisions varies with the level of comparability.

To conduct this test, I use the cross-sectional measure from Peterson et al. (2015) to proxy for the extent to which firms' accounting policies are consistent with those implemented by their industry peers.[24] *Ind_Acct_Inconsistency* equals one minus their measure of cross-sectional accounting consistency, so firms with accounting policies that are less consistent with those from their peers have higher values of *Ind_Acct_Inconsistency*. Next, I split the main sample of debt issues into firms with high cross-sectional accounting inconsistency (i.e., top tercile of the

[24] For more details on the construction of the cross-sectional measure of accounting consistency, please see Peterson et al. (2015, p. 2490).

distribution of *Ind_Acct_Inconsistency* in their industry-year) and issues with low *Ind_Acct_Inconsistency* (i.e., bottom tercile). In this analysis, I include the level of cross-sectional accounting inconsistency as well as the level of cross-sectional economic inconsistency (i.e., economic dissimilarity) as additional control variables.

Table 4 reports the results from estimating the relation between accounting inconsistency and the choice of debt source. Results from columns (1) and (2) indicate that the positive association between accounting inconsistency and the likelihood of obtaining bank loans is statistically significant only for firms with high cross-sectional accounting inconsistency (i.e., lower comparability). Moreover, the χ^2-statistic (p-value < 0.05) indicates a statistically significant difference in the coefficients of *Acct_Inconsistency* across the two groups. Finally, the results presented in columns (3) and (4) show that discretionary accounting policy changes within firms with high cross-sectional accounting inconsistency explain the previous finding.

While the previous analysis indicates that the effect of accounting inconsistency on the choice of borrowing from banks rather than issuing public debt varies depending on the level of cross-sectional accounting inconsistency, it does not capture the direction of the accounting policy changes adopted by the firm. That is, higher values of accounting inconsistency could be explained by accounting changes that result in a set of accounting policies more consistent with those adopted by peer firms (i.e., "converging" changes), but it could also reflect managerial choices that produce a set of financial statements that are less comparable to those from firms operating in the same industry (i.e., "diverging" changes). To the extent that diverging and converging changes are expected have a differential effect on the information asymmetry between borrowers and lenders, I also examine whether the association between accounting inconsistency and the choice to borrow from banks instead of issuing public debt varies across these types of changes.

To conduct this test, I split the sample of debt issues into two groups. I assign firms to the "Converge" group if they move from the top tercile of the distribution of *Ind_Acct_Inconsistency* in year t-2 to the bottom tercile of *Ind_Acct_Inconsistency* in year t-1 (i.e., if their significant accounting policies become less inconsistent with those from their peers). Similarly, I assign firms to the "Diverge" group if they move from the bottom tercile of the distribution of *Ind_Acct_Inconsistency* in year t-2 to the top tercile of *Ind_Acct_Inconsistency* in year t-1 (i.e., if their significant accounting policies become more inconsistent with those from their peers).

Table 5 presents the results for this test. Results from columns (1) and (2) show that the positive association between accounting inconsistency and the likelihood of obtaining bank loans is driven by firms diverging from their industry peers. Moreover, the χ^2-statistic (p-value < 0.10) indicates a statistically significant difference in the coefficients of *Acct_Inconsistency* across the two groups. The coefficient on *Disc_Inconsistency* reported in column (3) is positive and statistically significant (p-value < 0.05) which indicates that firms diverging from their peers due to the adoption of discretionary accounting policy changes are more likely to rely on private debt financing. Finally, the coefficient on *Stnd_Inconsistency* reported in column (4) is negative and statistically significant (p-value < 0.05). This finding is consistent with the view that the implementation of standard-level changes that leads firms to converge to the accounting policies used by their peers reduces the information asymmetries between borrowers and lenders which facilitates arm's length lending (i.e., public debt).

4.4. Accounting Inconsistency and Information Frictions

The results discussed above are consistent with the conjecture that that accounting inconsistency reduces the usefulness of public information disclosed by firms (e.g., financial statements) which undermines potential lenders' ability to accurately estimate future cash flows, thus imposing higher adverse selection costs for those borrowers. As a result, because financial intermediaries (e.g., banks) are better at mitigating the information frictions associated with accounting policy changes, firms with higher accounting inconsistency prefer to access the private debt market as opposed to the public debt market. In this section, I conduct two analyses to directly test this channel.

4.4.1. Accounting Inconsistency and Disagreement Between Credit Rating Agencies

Credit rating agencies use primarily accounting-based information obtained from the financial statements to assign credit ratings (Kaplan and Urwitz 1979; Blume, Lim, and Mackinlay 1998). Prior research shows that differences of opinions among bond raters reflects higher information asymmetry between issuers and investors, and captures uncertainty about the distribution of borrowers' future cash flows (Morgan 2002; Bonsall and Miller 2017). Therefore, I test whether accounting policy changes are related to increased information frictions between borrowers and lenders by examining the association between accounting inconsistency and bond rating disagreement.[25]

I obtain credit ratings issued by Moody's and S&P from FISD. Importantly, I keep only the initial credit ratings (i.e., those available at the bond issue date) to ensure that both agencies have access to a similar set of information about the borrower. Next, I transform the letter ratings

[25] Note that, unlike public lenders (e.g., bondholders), credit rating agencies are exempt from disclosure restrictions under Regulation FD. That is, similar to financial intermediaries (e.g., banks), they have access to material private information. Therefore, informational asymmetries between issuers and credit rating agencies represent a lower bound of the expected level of information asymmetry between issuers and potential public lenders.

from both agencies into a single numeric scale in which higher numbers represent worse letter ratings (e.g., Aaa = AAA = 1, Aa1 = AA+ = 2, ..., C = D = 21). Following Morgan (2002), I create an indicator variable (*Split*) and set it equal to one if the numeric rating from Moody's is different from the numeric rating from S&P, and zero otherwise. I also take the absolute difference between the two numeric ratings (*Magnitude*) to measure the magnitude of the bond rating disagreement. I follow Bonsall and Miller (2017) and control for several firm- and issue-specific characteristics.

Table 6 reports the results for this analysis. In columns (1) and (2) the dependent variable is *Split*, and in columns (3) and (4) the dependent variable is *Magnitude*. Overall, the results show that the coefficient on *Acct_Inconsistency* (*Disc_Inconsistency*) is positive and statistically significant (p-values < 0.01). Taken together, these findings are consistent with the conjecture that accounting inconsistency is associated with information frictions that increase the information asymmetry between borrowers and capital providers.

4.4.2. Accounting Inconsistency and Syndicated Loans

A syndicated loan is a loan in which a group of lenders collectively provide funds to a single borrower. The process starts with the borrower defining a "lead arranger" who negotiates some contract terms and guarantees a loan amount given a certain price range. Next, the lead arranger market the deal to potential lenders who might be interested in funding part of the loan. Those lenders who join the syndicate are called "participant lenders".

Prior research shows that information asymmetry affects the loan syndicate structure as well as the syndication process (Sufi 2007; Ivashina and Sun 2011). Therefore, to test the conjecture that the inconsistent application of accounting policies impacts the information processing of debt market participants, I examine whether accounting inconsistency is associated with certain contracting features of syndicated loans. Specifically, because participant lenders

possess less information about the borrowers relative to lead arrangers, I follow Fang, Li, Xin, and Zhang (2016) and investigate the relation between accounting inconsistency and two characteristics of syndicated loans that are likely to be associated with the level of information asymmetry within the group of lenders: (i) loan syndication duration (*Duration*) (i.e., the length of time between the launch date and the date in which the funds become available to the borrower); and (ii) the number of participants in the syndicate *(# of Participants*). Moreover, Bharath, Dahiya, Saunders, and Srinivasan (2007) show that borrowers with higher information asymmetries are more likely to obtain loans from relationship lenders (i.e., banks with which they have prior relationships). Therefore, I also test whether firms with higher accounting inconsistency are more likely to rely on relationship lending (*Relationship*).

Table 7 reports the results for these tests. Columns (1) and (2) present the results for the specification using *Duration* as the dependent variable. The positive and statistically significant coefficients on *Acct_Inconsistency* and *Disc_Inconsistency* (p-values < 0.05) indicate that the duration of the loan syndication process is longer for firms with higher accounting inconsistency. Columns (3) and (4) present the results for the specification using *# of Participants* as the dependent variable. The coefficient on *Disc_Inconsistency* is negative and statistically significant (p-value < 0.05), which suggests that loan syndicates for borrowers with more discretionary accounting changes attract fewer participants. Columns (5) and (6) present the results for the specification using *Relationship* as the dependent variable. The positive and statistically significant (p-value < 0.05) coefficient on *Disc_Inconsistency* suggests that firms with higher discretionary accounting inconsistency are more likely to rely on relationship lending. Overall, these findings are consistent with the conjecture that accounting inconsistency, especially the portion explained by discretionary accounting changes, is associated with greater information asymmetry.

5. Additional Analyses

5.1. Debt Contract Terms: Cost of Debt and Amount of Debt

In this section, I examine the association between accounting inconsistency and debt contract terms. Specifically, I investigate whether lenders adjust their credit terms (i.e., cost and amount of debt) as a response to the inconsistent implementation of accounting policies. Because the choice between issuing private or public debt is not random (e.g., the results reported above indicate that accounting inconsistency affects this choice), I examine the relation between accounting inconsistency and debt contract terms using an endogenous switching model.[26]

In the first stage, the model estimates the firms' choice between issuing private and public debt. In the second stage, the model estimates the relation between the covariates and the cost of debt (amount of debt). To mitigate concerns related to the reliability of the estimates, I follow Bharath et al. (2008) and use *Capital Market Access* as the exogenous variable in the first stage, and include characteristics of the debt contract (e.g., *Maturity*, *Amount*) as covariates unique to the second stage.

Table 8 reports the results for this analysis.[27] Columns (1) – (4) present the results for the models using *Spread* as the dependent variable. Columns (5) – (8) present the results for the models using *Amount* as the dependent variable. Overall, the results suggest that firms with higher accounting inconsistency obtain higher spreads and a lower amount of debt in the public debt market while they get a lower amount from the private debt market. Furthermore, the χ^2-statistics indicates a statistically significant difference in the coefficients of *Acct_Inconsistency* (*Disc_Inconsistency*) across the two debt markets in terms of *Spread*, but the same tests suggest

[26] Another benefit of this model is that it allows a direct comparison of coefficient estimates to examine whether the effect of accounting inconsistency varies across the two debt markets.

[27] For the sake of brevity, I tabulate only the results from the second stage models. The results from the first stage models are similar to those presented in Tables (3) and (4), Column (1).

no difference in *Amount* across the markets. To the extent that firms with higher accounting inconsistency are more likely to rely on banks with which they have prior relationships (Table 7, Columns (5) and (6)), these findings are consistent with those from Petersen and Rajan (1994) which show that lenders "appear to operate more through quantities rather than prices" (p. 3) in relationship lending.

5.2. The Choice Between Bank Debt, Non-Bank Debt, and Public Debt

Private placement is an alternative form of private debt financing available to firms. This market is composed of traditional private placements and debt securities issued under SEC Rule 144A. Because ownership of non-bank private debt is more concentrated than public debt, private placements offer higher monitoring incentives, lower covenant restrictions and greater flexibility of renegotiation in case of default (Kwan and Carleton 1995; Dennis and Mihov 2003). Prior research finds that firms issue non-bank private debt to avoid constraints associated with flotation costs and information asymmetry in the public debt market (Arena 2011). Therefore, I investigate whether firms with higher accounting inconsistency are also more likely to issue non-bank private debt than public debt.

For this analysis, I collect a sample of 612 private placements (e.g., debt issues under Rule 144A and other private debt placements) obtained from FISD and add it to the main sample of bank loans and public bonds. Next, I estimate a multinomial logit model to examine the likelihood of choosing non-bank private debt over public debt and bank debt over public debt (i.e., public debt is the reference group). The covariates used in this model are similar to those used in the main analysis. To facilitate the interpretation of results, I standardize all variables to have a mean of zero and a standard deviation of one and report relative risk ratios.[28]

[28] A relative risk ratio above (below) one indicates that the likelihood of the outcome increases (decreases) as the variable increases.

Table 9 reports the results for this test. Overall, the results suggest that firms with higher accounting inconsistency prefer bank and non-bank private debt over public debt. Specifically, the findings reported in column (1) (2) indicate that firms with a one standard deviation increase in accounting inconsistency are 1.113 (1.136) times more likely to issue non-bank (bank) private debt over public debt. Similarly, results from column (3) (4) suggest that firms with a one standard deviation increase in discretionary accounting inconsistency are 1.127 (1.177) times more likely to issue non-bank (bank) private debt over public debt.

6. Robustness Tests

In this section, I run several tests to assess the robustness of the results presented above. In the first group of analyses reported in Table 10, I examine the sensitivity of my results to alternative units of observations and estimation techniques. Specifically, to mitigate the concern that the inclusion of repetitive bank loan observations is driving my results, I conduct a robustness test using a sample with only one facility per loan package (i.e., package-level sample). Following Ivashina (2009), I keep only the facility with the largest loan amount in packages with multiple facilities. The results in column (1) (2) show that the association between accounting inconsistency (discretionary accounting inconsistency) and the likelihood to borrow privately is also positive and statistically significant in this alternative sample. Furthermore, because *Pct. Private* is a double-censored variable (i.e., lower bound of 0 and upper bound of 1), I follow Florou and Kosi (2015) and re-estimate the firm-level analysis using the Tobit estimator. The results in columns (3) and (4) show that my findings are not sensitive to the use of this alternative estimator. Finally, in columns (5) and (6) I show that the results are robust to the inclusion of firm fixed effects which control for unobservable time-invariant firm-level characteristics.

As noted above, in the main models I include several control variables that have been shown in prior literature to be associated with both firms' borrowing decisions and accounting inconsistency (Bharath et al. 2008; Dhaliwal et al. 2011; Peterson et al. 2015). In the next set of tests, I investigate whether my results are robust to the inclusion of additional control variables related to changes in the underlying business (*Sales Growth*, *# of Business Segments*, and *# of Geographic Segments*), the quality of firms' existing information environment (*Bid-Ask Spread*, *Stock Liquidity*, and *Stock Volatility*), financial statement complexity (*Bog Index*, and *Gunning*

Fog Index), and audit quality (*Big4*, *Auditor Change*, and *ICMW*).[29] Overall, the results in Table 11 show that my findings remain unchanged across all alternative model specifications.[30]

A potential concern is that firms with higher accounting inconsistency might not have the ability to access both debt markets (i.e., private and public).[31] I directly test this possibility by re-estimating the main models using two alternative samples: (i) only firms that have a long-term credit rating (i.e., *Rating* = 1); and (ii) only investment-grade firms (i.e., *Investment Grade* = 1) because prior studies suggest that firms that do not have a debt rating are not able to access the public debt market (Faulkender and Petersen 2006). Results from Table 12 show that my inferences are robust to the use of these two alternative samples. Therefore, these findings help to alleviate the concern that the positive association between accounting inconsistency and the likelihood of obtaining bank debt is driven by the lack of access to the public debt market.

To further assess the robustness of my findings, I consider an alternative measure of accounting inconsistency. Wang (2018) develops a proxy for accounting consistency based on the stability of the accounting function (i.e., the system that managers use to map economic events to financial statements). I follow Wang (2018) and construct an output-based measure of accounting inconsistency using the difference between actual and predicted earnings calculated by applying the prior years' accounting function to the current year's economic events.[32] In untabulated tests,

[29] Because my variable of interest (*Acct_Inconsistency*) captures changes in the significant accounting policies disclosed in the footnotes of 10-K filings, I assess whether my inferences are robust to the inclusion of changes in the control variables that are also based on the text in the 10-K filings. Accordingly, in untabulated tests, I re-estimate the models using changes (as opposed to levels) in *10K Length*, *Bog Index*, and *Gunning Fog Index*, and I find that my inferences are robust to this alternative model specification.

[30] To alleviate potential concerns related to multicollinearity, in untabulated tests, I re-estimate the models reported in Table 11 with each additional covariate included in a separate regression. My findings remain unchanged under these alternative model specifications.

[31] Importantly, in all of my models, I control for whether the firm had issued public debt in previous years (*Capital Market Access*).

[32] Because I am interested in examining the effects of accounting inconsistency, I multiply the accounting consistency measure from Wang (2018) by -1 so that higher values indicate more changes in the firm's accounting policies.

I find that my inferences are robust to the use of this alternative measure of accounting inconsistency.

7. Conclusion

Regulators and standard setters hold that accounting consistency is an important attribute of financial reporting because it enhances the usefulness of the financial statements. Consistent with that view, recent studies find evidence that accounting inconsistency is associated with higher information asymmetry and impacts the information processing of equity market participants. Prior research shows that financial intermediaries (e.g., banks) are better able to deal with information asymmetry than arms' length lenders (e.g., bondholders), suggesting that borrowers with poor information environment face lower adverse selection costs in the private debt market relative to the public debt market. Therefore, I posit that firms with higher accounting inconsistency are more likely to issue private debt (i.e., bank loans) than public debt (i.e., bonds).

I find a positive and statistically significant association between accounting inconsistency and the likelihood that a firm chooses to raise bank debt. Furthermore, I provide evidence that this association is driven by discretionary accounting changes as opposed to changes associated with new accounting standards. Because prior studies suggest that the level of accounting consistency across firms operating in the same industry (i.e., financial statement comparability) affects information processing of debt market participants, I also examine the extent to which cross-sectional accounting inconsistency affects the relation between accounting inconsistency and the choice of debt. I demonstrate that this association is concentrated among firms adopting accounting policies that are less consistent with those implemented by their industry peers.

Consistent with the view that accounting policy changes increase the information asymmetry between borrowers and potential lenders, I find that higher accounting inconsistency impacts disagreement among credit rating agencies. Moreover, I provide evidence that the inconsistent implementation of accounting policies affects the loan syndication process and the

reliance on relationship lending. Finally, I show that accounting inconsistency also impacts ex-ante debt contract terms. Specifically, firms with higher accounting inconsistency pay a higher cost of debt in the public debt market and face credit rationing in both private and public debt markets.

Collectively, my results suggest that changes in accounting policies impact debt contracting and provide evidence that private lenders are better able to mitigate information frictions arising from accounting inconsistency than public lenders. Therefore, this study contributes to the literature on the importance of accounting characteristics for debt contracting and to a large body of work that examines the determinants of the firms' debt structure.

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Appendices

Appendix A: Variable Definitions

Variables	Description	Source
Dependent Variables		
Private	Indicator variable set equal to one if the firm obtains a bank loan in year *t*, and zero if the firm issues a public bond in year *t*	Dealscan / FISD
Pct. Private	The total amount of bank loans obtained by the firm in year *t* divided by the total amount of debt (i.e., bank loans plus public bonds) issued by the firm in year *t*	Dealscan / FISD
Variables of Interest		
Acct_Inconsistency	One minus the time-series accounting consistency measure developed by Peterson et al. (2015) which captures the textual similarity of the firm's current and prior year's accounting policy disclosures (i.e., significant accounting policies footnotes disclosed in 10-K filings)	Peterson et al. (2015)
Disc_Inconsistency	Residuals obtained from the regression of *Acct_Inconsistency* on industry-year interactions	Peterson et al. (2015)
Stnd_Inconsistency	Predicted values from the regression of *Acct_Inconsistency* on industry-year interactions	Peterson et al. (2015)

Control Variables (Main Analyses)

# of Analysts	Natural logarithm of one plus the number of analysts following the firm at the end of the fiscal year	IBES
10K Length	Natural logarithm of the number of words included in the most recent 10-K filing	WRDS SEC Analytics – Readability and Sentiment
Acquisition	Indicator variable set equal to one if the firm engages in a merger or acquisition in year t, and zero otherwise	Compustat
Capital Market Access	Indicator variable set equal to one if the firm issued a public bond in the past, and zero otherwise. Calculated using the entire history of public debt issues available on FISD	FISD
Default Risk	The first principal component of three proxies for default risk: *Z-Score*, *Rating*, and *Investment Grade* (Dhaliwal et al. 2011)	Compustat
Disc_Accruals	The absolute value of the residuals from the Dechow and Dichev (2002) model	Compustat
Econ_Inconsistency	One minus the time-series economic (business) consistency measure developed by Peterson et al. (2015) which captures the textual similarity of the firm's current and prior year's business description disclosures (i.e., Item 1 or Item 1A of the 10-K filing)	Peterson et al. (2015)

Ind_Acct_Inconsistency	One minus the cross-sectional accounting consistency measure from Peterson et al. (2015)	Peterson et al. (2015)
Ind_Econ_Inconsistency	One minus the cross-sectional economic (business) inconsistency measure from Peterson et al. (2015)	Peterson et al. (2015)
Investment Grade	Indicator variable set equal to one if the S&P credit rating for the firm is investment grade (i.e., BBB or higher), and zero otherwise	Compustat
Leverage	Short-term debt (DLC) plus long-term debt (DLTT) divided by total assets (AT)	Compustat
MTB	The market value of equity (PRCC*CSHO) divided by book value of equity	Compustat
Rating	Indicator variable set equal to one if the firm has a credit rating from S&P, and zero otherwise	Compustat
Size	Natural logarithm of total assets (AT)	Compustat
Tangibility	Total net property, plant, and equipment (PPENT) divided by total assets (AT)	Compustat
Z-Score	Altman's Z-Score calculated following Altman (1968)	Compustat

Other Variables

# of Business Segments	Natural logarithm of the firm's number of business segments	Compustat
# of Geographic Segments	Natural logarithm of the firm's number of geographic segments	Compustat
# of Leads	Natural logarithm of the number of lead arrangers in the syndicated loan	Dealscan
# of Participants	Natural logarithm of the number of participants in the syndicated loan	Dealscan
Amount	Natural logarithm of the bank loan (bond) amount	Dealscan (FISD)
Auditor Change	Indicator variable set equal to one if the firm changed its auditor during the fiscal year, and zero otherwise	Audit Analytics
Big4	Indicator variable set equal to one if the firm is audited by a Big 4 auditor, and zero otherwise	Audit Analytics
Duration	Natural logarithm of the number of days between the loan syndicate's launch date and deal active date	Dealscan

Institutional Loan	Indicator variable set equal to one if the terms "Term Loan B", "Term Loan C", or "Term Loan D" are included in the loan type description, and zero otherwise	Dealscan
Magnitude	The absolute value of the difference in the numeric credit rating between Moody's and S&P	FISD
Maturity	Natural logarithm of the maturity (in months) for the bank loan/bond.	Dealscan / FISD
Relationship	The number of loans associated with the lead arranger in the prior five years divided by the total number of loans obtained by the firm in the same period. Following Bharath et al. (2011), I use the maximum value in case there are multiple lead arrangers.	Dealscan
Relationship Lender	Indicator variable set equal to one if any of the lead arrangers is involved in at least one other bank loan obtained by the firm in the prior five years, and zero otherwise	Dealscan
Revolver Loan	Indicator variable set equal to one if the term "Revolver" is included in the loan type description, and zero otherwise	Dealscan
Secured Loan	Indicator variable set equal to one if the loan is secured, and zero otherwise	Dealscan

Split	Indicator variable set equal to one if Moody's credit rating for the bond issue is not equal to that from S&P, and zero otherwise	FISD
Spread	For bank loans, it is the natural logarithm of the all-in-drawn spread over LIBOR. For bonds, it is the natural logarithm of the interest spread over the interest rate on a Treasury security of similar maturity.	Dealscan / FISD
Stock Volatility	The standard deviation of stock daily returns measured over the fiscal year	CRSP

Appendix B: Tables

Table 1
Summary Statistics

Panel A: Descriptive Statistics of Firm Characteristics

Variable	N	Mean	STD	P10	P25	P50	P75	P90
Private	8,166	0.874	0.332	0.000	1.000	1.000	1.000	1.000
Acct_Inconsistency	8,166	0.126	0.061	0.051	0.080	0.119	0.164	0.208
Disc_Inconsistency	8,166	-0.002	0.054	-0.067	-0.039	-0.007	0.030	0.070
Stnd_Inconsistency	8,166	0.127	0.027	0.090	0.112	0.130	0.145	0.160
Econ_Inconsistency	8,166	0.123	0.084	0.040	0.064	0.102	0.159	0.235
Size	8,166	7.148	1.832	4.705	5.845	7.163	8.467	9.542
MTB	8,166	3.083	3.158	0.938	1.401	2.168	3.460	5.774
Default Risk	8,166	0.017	1.275	-1.753	-1.519	-0.246	1.180	1.388
Tangibility	8,166	0.286	0.229	0.057	0.113	0.210	0.406	0.654
Leverage	8,166	0.217	0.166	0.001	0.086	0.199	0.326	0.456
Disc_Accruals	8,166	0.039	0.039	0.005	0.012	0.026	0.051	0.093
Capital Markets Access	8,166	0.537	0.499	0.000	0.000	1.000	1.000	1.000
Acquisition	8,166	0.533	0.499	0.000	0.000	1.000	1.000	1.000
# of Analysts	8,166	1.945	0.943	0.693	1.386	2.079	2.708	3.091
10K Length	8,166	10.380	0.519	9.681	10.061	10.436	10.708	10.981

Panel B: Comparison of Means - High *Acct_Inconsistency* vs Low *Acct_Inconsistency*

	Low	High	High - Low
	n = 2,724	n = 2,723	t-test
Private	0.829	0.916	9.612***
Econ_Inconsistency	0.104	0.144	17.340***
Size	7.469	6.745	-14.831***
MTB	3.057	3.161	1.202
Default Risk	-0.106	0.154	7.513***
Tangibility	0.289	0.281	-1.243
Leverage	0.218	0.219	0.104
Disc_Accruals	0.035	0.045	9.333***
Capital Markets Access	0.587	0.474	-8.428***
Acquisition	0.543	0.529	-1.045
# of Analysts	2.075	1.769	-12.025***
10K Length	10.419	10.315	-7.272***

Notes: Panel A presents summary statistics for the variables used in the main tests and Panel B presents sample means for the subsamples of observations with low (i.e., bottom tercile of *Acct_Inconsistency*) and high accounting inconsistency (i.e., top tercile of *Acct_Inconsistency*). All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, for a t-test of difference in means.

Table 2
Accounting Inconsistency and the Choice Between Private and Public Debt

	(1)	(2)
	Private	*Pct. Private*
Acct_Inconsistency	0.170**	0.152**
	(2.228)	(2.221)
Econ_Inconsistency	0.058	-0.002
	(1.140)	(-0.041)
Size	-0.048***	-0.038***
	(-9.682)	(-6.407)
MTB	-0.004***	-0.003**
	(-3.136)	(-2.168)
Default Risk	0.040***	0.044***
	(7.101)	(7.921)
Tangibility	-0.079***	-0.033
	(-2.677)	(-1.018)
Leverage	0.128***	0.054*
	(4.141)	(1.821)
Capital Markets Access	-0.014***	-0.032***
	(-2.784)	(-2.930)
Disc_Accruals	0.172	-0.076
	(1.414)	(-0.835)
Acquisition	-0.005	0.012
	(-0.592)	(1.338)
# of Analysts	-0.023***	0.007
	(-2.698)	(1.123)
10K Length	0.001	0.007
	(0.124)	(0.615)
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	7,919	5,137
Pseudo R^2	0.395	
Adj. R^2		0.221

Notes: This table presents the results of a Probit (OLS) model with *Private* (*Pct. Private*) as the dependent variable. The sample period is from 1996 through 2013. All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Column (1) presents average marginal effects (AMEs), and the respective Z-statistics in parentheses. Column (2) presents estimates coefficients and the respective t-statistics in parentheses. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 3
Disaggregated Accounting Inconsistency and the Choice Between Private and Public Debt

	(1)	(2)
	Private	*Pct. Private*
Disc_Inconsistency	0.170**	0.148**
	(2.198)	(2.139)
Stnd_Inconsistency	0.170	0.291
	(0.411)	(0.750)
Econ_Inconsistency	0.058	-0.002
	(1.139)	(-0.038)
Size	-0.048***	-0.038***
	(-9.681)	(-6.413)
MTB	-0.004***	-0.003**
	(-3.137)	(-2.172)
Default Risk	0.040***	0.044***
	(7.101)	(7.895)
Tangibility	-0.079***	-0.033
	(-2.682)	(-1.022)
Leverage	0.128***	0.054*
	(4.148)	(1.829)
Capital Markets Access	-0.014***	-0.032***
	(-2.784)	(-2.935)
Disc_Accruals	0.172	-0.077
	(1.419)	(-0.847)
Acquisition	-0.005	0.012
	(-0.591)	(1.344)
# of Analysts	-0.023***	0.008
	(-2.699)	(1.129)
10K Length	0.001	0.007
	(0.124)	(0.617)
Observations	7,919	5,137
Industry FE	Yes	Yes
Year FE	Yes	Yes
Pseudo R^2	0.395	
Adj. R^2		0.220

Notes: This table presents the results of a Probit (OLS) model with *Private* (*Pct. Private*) as the dependent variable. The sample period is from 1996 through 2013. All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Column (1) presents average marginal effects (AMEs), and the respective Z-statistics in parentheses. Column (2) presents estimates coefficients and the respective t-statistics in parentheses. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 4
Cross-Sectional Analysis: High vs Low *Ind_Acct_Inconsistency*

	(1) *Private* High	(2) *Private* Low	(3) *Private* High	(4) *Private* Low
Acct_Inconsistency	0.434***	0.005		
	(3.243)	(0.041)		
Disc_Inconsistency			0.462***	0.005
			(3.409)	(0.039)
Stnd_Inconsistency			-0.599	0.049
			(-0.618)	(0.079)
Econ_Inconsistency	0.000	0.033	-0.002	0.033
	(0.001)	(0.465)	(-0.016)	(0.464)
Ind_Acct_Inconsistency	0.785***	-1.055*	0.803***	-1.055*
	(2.850)	(-1.801)	(2.851)	(-1.802)
Ind_Econ_Inconsistency	-0.115	0.368	-0.136	0.368
	(-0.436)	(1.499)	(-0.525)	(1.498)
Size	-0.052***	-0.044***	-0.052***	-0.044***
	(-5.647)	(-5.528)	(-5.684)	(-5.527)
MTB	-0.004*	-0.004**	-0.004*	-0.004*
	(-1.807)	(-1.966)	(-1.833)	(-1.941)
Default Risk	0.051***	0.037***	0.051***	0.037***
	(4.236)	(4.547)	(4.263)	(4.544)
Tangibility	-0.101	-0.053	-0.095	-0.053
	(-1.601)	(-0.995)	(-1.507)	(-1.002)
Leverage	0.150**	0.128**	0.145**	0.128**
	(2.359)	(2.371)	(2.304)	(2.373)
Capital Markets Access	-0.016	-0.036*	-0.014	-0.035*
	(-0.676)	(-1.909)	(-0.596)	(-1.912)
Disc_Accruals	0.107	0.140	0.120	0.140
	(0.440)	(0.869)	(0.498)	(0.870)
Acquisition	-0.022	0.010	-0.022	0.011
	(-1.338)	(0.739)	(-1.334)	(0.744)
# of Analysts	-0.030	-0.011	-0.030	-0.011
	(-1.574)	(-0.901)	(-1.539)	(-0.895)
10K Length	-0.001	0.041**	-0.000	0.041**
	(-0.050)	(2.383)	(-0.007)	(2.384)
H_0: $Acct\_Inconsistency_{High} = Acct\_Inconsistency_{Low}$	$\chi^2(1) = 3.98$ p-value = 0.046			
H_0: $Disc\_Inconsistency_{High} = Disc\_Inconsistency_{Low}$			$\chi^2(1) = 4.41$ p-value = 0.036	
H_0: $Stnd\_Inconsistency_{High} = Stnd\_Inconsistency_{Low}$			$\chi^2(1) = 0.28$ p-value = 0.598	
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	2,460	2,503	2,460	2,503
Pseudo R^2	0.416	0.407	0.416	0.407

Notes: This table presents the results of Probit models with *Private* as the dependent variable. All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Columns (1) and (3) present average marginal effects (AMEs), and the respective Z-statistics in parentheses for the subsample of observations with *high* cross-sectional accounting inconsistency (i.e., top tercile of *Ind_Acct_Inconsistency*). Columns (2) and (4) present average marginal effects (AMEs), and the respective Z-statistics in parentheses for the subsample of observations with *low* cross-sectional accounting inconsistency (i.e., bottom tercile of *Ind_Acct_Inconsistency*). Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 5
Cross-Sectional Analysis: Diverge vs Converge

	(1) *Private* Diverge	(2) *Private* Converge	(3) *Private* Diverge	(4) *Private* Converge
Acct_Inconsistency	0.245**	-0.089		
	(2.299)	(-0.237)		
Disc_Inconsistency			0.261**	0.112
			(2.483)	(0.334)
Stnd_Inconsistency			-0.354	-3.962**
			(-0.582)	(-2.040)
Econ_Inconsistency	-0.016	0.775***	-0.014	0.777***
	(-0.202)	(2.803)	(-0.178)	(3.158)
Ind_Acct_Inconsistency	0.008	-1.419	0.011	-2.272
	(0.043)	(-0.859)	(0.059)	(-1.393)
Ind_Econ_Inconsistency	0.166	-0.286	0.159	-0.607
	(0.861)	(-0.536)	(0.830)	(-1.154)
Size	-0.050***	-0.078***	-0.050***	-0.082***
	(-7.536)	(-3.420)	(-7.534)	(-3.887)
MTB	-0.004***	-0.019***	-0.004***	-0.019***
	(-2.724)	(-3.793)	(-2.693)	(-4.095)
Default Risk	0.042***	0.090***	0.042***	0.089***
	(5.789)	(3.456)	(5.801)	(3.566)
Tangibility	-0.125***	0.059	-0.122***	0.104
	(-3.003)	(0.310)	(-2.899)	(0.588)
Leverage	0.140***	0.182	0.137***	0.180
	(3.053)	(1.054)	(3.012)	(1.076)
Capital Markets Access	-0.028*	0.009	-0.028	0.013
	(-1.661)	(0.166)	(-1.645)	(0.234)
Disc_Accruals	0.228	0.309	0.234	0.693
	(1.384)	(0.544)	(1.424)	(1.248)
Acquisition	-0.012	0.090**	-0.012	0.074**
	(-0.955)	(2.459)	(-0.989)	(2.138)
# of Analysts	-0.010	-0.086**	-0.010	-0.068*
	(-0.908)	(-2.022)	(-0.917)	(-1.707)
10K Length	0.014	-0.198***	0.014	-0.204***
	(0.914)	(-3.195)	(0.921)	(-3.398)
H_0: $Acct\_Inconsistency_{Diverge} = Acct\_Inconsistency_{Converge}$	$\chi^2(1) = 3.09$ p-value = 0.079			
H_0: $Disc\_Inconsistency_{Diverge} = Disc\_Inconsistency_{Converge}$			$\chi^2(1) = 2.99$ p-value = 0.084	
H_0: $Stnd\_Inconsistency_{Diverge} = Stnd\_Inconsistency_{Converge}$			$\chi^2(1) = 3.00$ p-value = 0.083	
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	352	391	352	391
Pseudo R^2	0.409	0.569	0.410	0.576

Notes: This table presents the results of Probit models with *Private* as the dependent variable. All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Columns (1) and (3) present average marginal effects (AMEs), and the respective Z-statistics in parentheses for the subsample of observations that diverge from the accounting policies implemented by their peers. Columns (2) and (4) present average marginal effects (AMEs), and the respective Z-statistics in parentheses for the subsample of observations that converge to the accounting policies implemented by their peers. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 6
Channel Analysis: Bond Rating Disagreement

	(1) *Split*	(2) *Split*	(3) *Magnitude*	(4) *Magnitude*
Acct_Inconsistency	1.443***		1.703***	
	(3.671)		(2.712)	
Disc_Inconsistency		1.730***		1.983***
		(4.048)		(2.774)
Stnd_Inconsistency		-3.646		-2.400
		(-1.493)		(-0.519)
Econ_Inconsistency	0.140	0.175	0.260	0.290
	(0.497)	(0.612)	(0.471)	(0.514)
Ind_Acct_Inconsistency	0.926	0.840	2.398	2.368
	(0.776)	(0.695)	(1.075)	(1.046)
Ind_Econ_Inconsistency	1.434*	1.306*	0.766	0.616
	(1.876)	(1.716)	(0.492)	(0.399)
Size	-0.110***	-0.110***	-0.092	-0.093
	(-3.109)	(-3.106)	(-1.306)	(-1.312)
MTB	-0.007	-0.006	-0.002	-0.001
	(-0.771)	(-0.698)	(-0.108)	(-0.063)
Default Risk	0.010	0.008	0.073	0.068
	(0.341)	(0.267)	(1.029)	(0.958)
Tangibility	0.102	0.044	-0.007	-0.059
	(0.535)	(0.228)	(-0.019)	(-0.161)
Leverage	0.130	0.156	0.082	0.098
	(0.631)	(0.759)	(0.218)	(0.262)
Capital Markets Access	-0.066	-0.085	-0.046	-0.065
	(-0.630)	(-0.779)	(-0.280)	(-0.385)
Disc_Accruals	0.445	0.455	1.552	1.609
	(0.541)	(0.558)	(1.055)	(1.090)
Acquisition	-0.114**	-0.113**	-0.218**	-0.218**
	(-2.341)	(-2.326)	(-2.292)	(-2.274)
# of Analysts	0.082*	0.082*	0.092	0.091
	(1.656)	(1.669)	(0.938)	(0.926)
10K Length	0.170***	0.179***	0.311***	0.317***
	(2.697)	(2.851)	(2.938)	(3.033)
# of Business Segments	-0.012	-0.014	-0.037	-0.037
	(-0.245)	(-0.278)	(-0.394)	(-0.394)
# of Geographic Segments	0.043	0.032	0.009	0.001
	(0.815)	(0.622)	(0.088)	(0.010)
Amount	0.099**	0.093**	0.139*	0.137*
	(2.174)	(2.063)	(1.805)	(1.766)
Maturity	-0.027	-0.029	-0.027	-0.030
	(-1.030)	(-1.108)	(-0.583)	(-0.630)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	689	689	689	689
Pseudo R^2	0.190	0.197		
Adjusted R^2			0.142	0.143

Notes: This table presents the results of Probit (OLS) models with *Split* (*Magnitude*) as the dependent variable. All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Columns (1) and (2) present average marginal effects (AMEs), and the respective Z-statistics in parentheses. Columns (3) and (4) present coefficient estimates, and the respective t-statistics in parentheses. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 7
Channel Analysis: Loan Syndication Process and Loan Syndicate Structure

	(1) *Duration*	(2) *Duration*	(3) *# Participants*	(4) *# Participants*	(5) *Relationship*	(6) *Relationship*
Acct_Inconsistency	1.358**		0.243		-0.005	
	(2.055)		(0.845)		(-0.040)	
Disc_Inconsistency		1.417**		-0.344**		0.045**
		(2.122)		(-2.385)		(2.197)
Stnd_Inconsistency		-2.960		3.193		-1.413
		(-0.920)		(1.171)		(-0.373)
Econ_Inconsistency	-0.571	-0.498	-0.168	-0.169	0.049	0.051
	(-1.482)	(-1.273)	(-0.875)	(-0.876)	(0.640)	(0.663)
Ind_Acct_Inconsistency	-2.670	-2.616	0.006	-0.028	0.198	0.204
	(-1.637)	(-1.611)	(0.007)	(-0.033)	(0.619)	(0.638)
Ind_Econ_Inconsistency	3.781**	3.728**	-0.626	-0.672	-0.143	-0.130
	(2.455)	(2.457)	(-1.456)	(-1.567)	(-0.608)	(-0.552)
Size	-0.084*	-0.076	0.038	0.040	0.018*	0.017*
	(-1.652)	(-1.484)	(1.546)	(1.609)	(1.813)	(1.729)
MTB	-0.016*	-0.016*	0.002	0.001	0.000	0.000
	(-1.876)	(-1.927)	(0.302)	(0.279)	(0.193)	(0.189)
Default Risk	-0.020	-0.015	-0.026	-0.025	0.001	0.000
	(-0.436)	(-0.320)	(-1.395)	(-1.359)	(0.083)	(0.023)
Tangibility	0.176	0.178	0.271***	0.278***	0.007	0.005
	(0.782)	(0.788)	(2.648)	(2.709)	(0.144)	(0.105)
Leverage	0.371*	0.385*	-0.147	-0.148	0.075	0.075
	(1.815)	(1.885)	(-1.412)	(-1.417)	(1.536)	(1.544)
Capital Markets Access	0.073	0.070	0.019	0.019	0.002	0.001
	(1.105)	(1.067)	(0.438)	(0.446)	(0.079)	(0.073)
Disc_Accruals	-0.361	-0.363	-0.004	0.026	-0.195	-0.206
	(-0.349)	(-0.348)	(-0.008)	(0.053)	(-1.168)	(-1.231)
Acquisition	0.021	0.026	0.058**	0.056*	0.009	0.010
	(0.291)	(0.359)	(2.013)	(1.958)	(0.659)	(0.692)
# of Analysts	0.089**	0.082*	0.091***	0.090***	-0.007	-0.006
	(2.006)	(1.885)	(3.897)	(3.857)	(-0.554)	(-0.480)
10K Length	0.127	0.129	-0.037	-0.036	0.002	0.002
	(1.337)	(1.354)	(-0.800)	(-0.784)	(0.124)	(0.100)
Amount	0.066**	0.064**	0.354***	0.354***	0.047***	0.047***
	(2.327)	(2.257)	(21.331)	(21.397)	(7.632)	(7.630)
Maturity	0.127	0.131	0.230***	0.229***	-0.045***	-0.045***
	(1.508)	(1.564)	(6.921)	(6.925)	(-3.803)	(-3.804)
Revolver Loan	0.037	0.036	-0.184***	-0.184***	0.001	0.002
	(0.623)	(0.611)	(-6.267)	(-6.241)	(0.117)	(0.152)
Institutional Loan	-0.239***	-0.239***	-0.530***	-0.532***	0.024	0.025
	(-3.195)	(-3.198)	(-10.046)	(-10.077)	(1.332)	(1.379)
Secured Loan	-0.206**	-0.205**	0.025	0.025	0.003	0.003
	(-2.151)	(-2.150)	(0.833)	(0.832)	(0.178)	(0.166)
Relationship Lender	0.059	0.064	0.150***	0.152***		
	(0.799)	(0.859)	(5.304)	(5.403)		
# of Leads	-0.053	-0.059	-0.015	-0.017		
	(-0.776)	(-0.862)	(-0.329)	(-0.370)		
Loan Purpose FEs	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	738	738	5,423	5,423	6,811	6,811
Adjusted R^2	0.214	0.215	0.379	0.380	0.149	0.150

Notes: This table presents the results of OLS models with *Duration*, *# of Participants* and *Relationship* as the dependent variables. All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Columns (1) - (6) present coefficient estimates, and the respective t-statistics in parentheses. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 8
Accounting Inconsistency and Debt Terms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Spread				*Amount*			
	Loans	Bonds	Loans	Bonds	Loans	Bonds	Loans	Bonds
Acct_Inconsistency	0.229	1.104**			-1.183***	-0.813**		
	(1.396)	(2.319)			(-4.026)	(-2.000)		
Disc_Inconsistency			0.228	1.204**			-1.200***	-0.806*
			(1.376)	(2.496)			(-4.014)	(-1.937)
Stnd_Inconsistency			0.297	-0.855			-0.576	-1.004
			(0.344)	(-0.281)			(-0.376)	(-0.462)
Econ_Inconsistency	0.360***	0.375	0.360***	0.393	-0.306	0.385*	-0.305	0.387*
	(3.202)	(1.239)	(3.202)	(1.309)	(-1.534)	(1.725)	(-1.535)	(1.724)
Size	-0.087***	-0.517***	-0.087***	-0.520***	0.796***	0.528***	0.796***	0.528***
	(-5.861)	(-12.469)	(-5.870)	(-12.623)	(47.895)	(19.198)	(47.742)	(19.259)
MTB	-0.010**	-0.025***	-0.010**	-0.025***	0.013**	0.004	0.013**	0.004
	(-2.327)	(-2.905)	(-2.326)	(-2.887)	(2.036)	(0.666)	(2.040)	(0.662)
Default Risk	-0.037***	-0.083***	-0.037***	-0.083***	0.035***	0.048***	0.035***	0.048***
	(-7.985)	(-4.650)	(-7.981)	(-4.646)	(4.690)	(3.786)	(4.696)	(3.789)
Tangibility	-0.351***	-0.533*	-0.351***	-0.524*	0.284**	0.149	0.284**	0.148
	(-4.655)	(-1.814)	(-4.658)	(-1.769)	(2.025)	(1.059)	(2.023)	(1.048)
Leverage	0.586***	0.237	0.586***	0.232	-0.143	0.591***	-0.143	0.592***
	(8.156)	(0.840)	(8.151)	(0.825)	(-0.951)	(2.966)	(-0.952)	(2.954)
Disc_Accruals	-0.187	0.959*	-0.187	0.975*	0.110	-0.043	0.111	-0.042
	(-1.260)	(1.701)	(-1.259)	(1.747)	(0.455)	(-0.088)	(0.459)	(-0.085)
Acquisition	0.168***	0.190*	0.168***	0.187*	-0.014	-0.260***	-0.014	-0.260***
	(6.013)	(1.748)	(6.020)	(1.723)	(-0.275)	(-2.869)	(-0.269)	(-2.862)
# of Analysts	-0.003	-0.009	-0.003	-0.008	0.009	0.046**	0.009	0.046**
	(-0.283)	(-0.272)	(-0.284)	(-0.234)	(0.443)	(2.561)	(0.442)	(2.549)
10K Length	0.177***	0.159**	0.177***	0.158**	-0.075	-0.065	-0.076	-0.065
	(5.424)	(2.318)	(5.424)	(2.274)	(-1.335)	(-1.239)	(-1.344)	(-1.233)
Maturity	0.184***	0.173***	0.184***	0.171***	0.243***	0.028	0.243***	0.028
	(9.082)	(6.470)	(9.087)	(6.516)	(7.080)	(1.125)	(7.097)	(1.140)
Amount	-0.186***	0.150***	-0.186***	0.150***				
	(-13.415)	(4.497)	(-13.417)	(4.616)				
H_0: $Acct\_Inconsistency_{Loans} = Acct\_Inconsistency_{Bonds}$	$\chi^2(1) = 3.18$ p-value = 0.075				$\chi^2(1) = 0.65$ p-value = 0.420			
H_0: $Disc\_Inconsistency_{Loans} = Disc\_Inconsistency_{Bonds}$			$\chi^2(1) = 3.83$ p-value = 0.050				$\chi^2(1) = 0.69$ p-value = 0.407	
H_0: $Stnd\_Inconsistency_{Loans} = Stnd\_Inconsistency_{Bonds}$			$\chi^2(1) = 0.15$ p-value = 0.703				$\chi^2(1) = 0.03$ p-value = 0.858	
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,890	1,029	6,890	1,029	6,890	1,029	6,890	1,029
Wald test of independent equations (p-value)	$\chi^2 = 48.81$ (p-value < 0.01)		$\chi^2 = 50.25$ (p-value < 0.01)		$\chi^2 = 138.61$ (p-value < 0.01)		$\chi^2 = 141.32$ (p-value < 0.01)	

Notes: This table presents the results of endogenous switching models with *Spread* and *Amount* as the dependent variables. The results for the first stage equations are similar to those presented in column (1) of Tables (3) and (4). All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Columns (1) - (8) present coefficient estimates, and the respective Z-statistics in parentheses. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 9
Public Debt, Non-Bank Private Debt, and Bank Debt

	(1) Non-Bank Private Debt	(2) Bank Debt	(3) Non-Bank Private Debt	(4) Bank Debt
Acct_Inconsistency	1.113**	1.136**		
	(2.055)	(2.299)		
Disc_Inconsistency			1.127**	1.177**
			(2.001)	(2.286)
Stnd_Inconsistency			1.005	1.091
			(0.022)	(0.524)
Econ_Inconsistency	1.097	1.097	1.104	1.096
	(0.987)	(1.502)	(1.061)	(1.488)
Size	0.498***	0.306***	0.498***	0.306***
	(-3.653)	(-8.773)	(-3.659)	(-8.771)
MTB	0.749***	0.844***	0.748***	0.843***
	(-2.960)	(-2.788)	(-2.968)	(-2.794)
Default Risk	2.439***	2.151***	2.443***	2.154***
	(5.536)	(6.240)	(5.539)	(6.249)
Tangibility	0.890	0.763***	0.890	0.762***
	(-0.818)	(-2.864)	(-0.825)	(-2.894)
Leverage	1.894***	1.351***	1.899***	1.352***
	(6.119)	(3.795)	(6.159)	(3.818)
Capital Markets Access	1.445**	0.871	1.439**	0.869
	(2.516)	(-1.413)	(2.492)	(-1.437)
Disc_Accruals	1.335***	1.105	1.338***	1.104
	(2.737)	(1.409)	(2.774)	(1.410)
Acquisition	0.875	0.962	0.875	0.963
	(-1.414)	(-0.656)	(-1.407)	(-0.651)
# of Analysts	0.702**	0.693***	0.703**	0.693***
	(-2.137)	(-3.033)	(-2.140)	(-3.040)
10K Length	1.251**	1.005	1.254**	1.004
	(1.993)	(0.064)	(2.008)	(0.061)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	8,531		8,531	
Pseudo R^2	0.322		0.323	

Notes: This table presents the results of a multinomial logit model examining the likelihood that firms issue non-bank private debt over public debt (columns (1) and (3)) and bank debt over public debt (columns (2) and (4)). All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. All variables are standardized (i.e., have a mean of zero and a standard deviation of one). Columns (1) - (4) present relative risk ratios, and the respective z-statistics in parentheses. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 10
Robustness Test: Alternative Estimations

	(1)	(2)	(3)	(4)	(5)	(6)
	Private	*Private*	*Pct. Private*	*Pct. Private*	*Pct. Private*	*Pct. Private*
Acct_Inconsistency	0.175**		1.586**		0.175*	
	(2.000)		(2.176)		(1.920)	
Disc_Inconsistency		0.162*		1.666**		0.178*
		(1.829)		(2.272)		(1.951)
Stnd_Inconsistency		0.551		-0.529		0.105
		(1.129)		(-0.156)		(0.213)
Econ_Inconsistency	0.076	0.076	-0.465	-0.466	0.028	0.028
	(1.254)	(1.254)	(-0.896)	(-0.898)	(0.382)	(0.379)
Size	-0.059***	-0.059***	-0.404***	-0.404***	-0.024	-0.024
	(-10.664)	(-10.704)	(-7.690)	(-7.686)	(-1.511)	(-1.463)
MTB	-0.005***	-0.005***	-0.021*	-0.021*	-0.003	-0.003
	(-3.251)	(-3.272)	(-1.714)	(-1.692)	(-1.416)	(-1.398)
Default Risk	0.046***	0.046***	0.338***	0.338***	0.021*	0.021*
	(6.958)	(6.947)	(6.612)	(6.627)	(1.816)	(1.818)
Tangibility	-0.072**	-0.074**	-0.623***	-0.629***	-0.074	-0.076
	(-2.106)	(-2.174)	(-3.435)	(-3.464)	(-0.818)	(-0.836)
Leverage	0.109***	0.110***	-0.358	-0.354	0.063	0.061
	(3.038)	(3.091)	(-1.271)	(-1.258)	(1.094)	(1.069)
Capital Markets Access	-0.016	-0.016	-0.606***	-0.604***	0.067***	0.067***
	(-1.079)	(-1.101)	(-5.016)	(-4.997)	(2.780)	(2.781)
Disc_Accruals	0.206	0.200	-0.709	-0.687	-0.020	-0.020
	(1.495)	(1.459)	(-0.559)	(-0.543)	(-0.176)	(-0.175)
Acquisition	-0.011	-0.011	-0.007	-0.007	-0.007	-0.007
	(-1.173)	(-1.143)	(-0.081)	(-0.082)	(-0.536)	(-0.531)
# of Analysts	-0.026***	-0.026***	-0.044	-0.043	0.000	-0.000
	(-2.638)	(-2.627)	(-0.649)	(-0.638)	(0.023)	(-0.003)
10K Length	0.002	0.002	-0.073	-0.071	-0.014	-0.014
	(0.221)	(0.210)	(-0.781)	(-0.760)	(-0.708)	(-0.718)
Firm FEs	No	No	No	No	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,879	5,879	5,137	5,137	4,311	4,311
Pseudo R^2	0.406	0.406	0.245	0.244		
Adjusted R^2					0.084	0.084

Notes: This table presents some robustness tests. Columns (1) and (2) report the results of the Probit model estimated at the debt issue-level using only one facility per package. Columns (3) and (4) report the results of Tobit models estimated at the firm-year level. Columns (5) and (6) report the results of a firm fixed-effects model. All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 11
Robustness Test: Alternative Model Specifications

	(1) *Private*	(2) *Private*	(3) *Private*	(4) *Private*	(5) *Private*	(6) *Private*	(7) *Private*	(8) *Private*
Acct_Inconsistency	0.157**		0.164**		0.164**		0.217*	
	(2.023)		(2.020)		(2.170)		(1.956)	
Disc_Inconsistency		0.152*		0.163**		0.160**		0.203*
		(1.949)		(1.985)		(2.097)		(1.829)
Stnd_Inconsistency		0.314		0.235		0.288		0.911
		(0.754)		(0.534)		(0.703)		(1.219)
Sales Growth	0.003	0.003						
	(0.157)	(0.157)						
Chg. # of Business Segments	0.004	0.004						
	(0.480)	(0.480)						
Chg. # of Geographic Segments	-0.006	-0.006						
	(-0.847)	(-0.847)						
Bid-Ask Spread			0.581	0.593				
			(0.153)	(0.157)				
Stock Liquidity			-0.006	-0.006				
			(-1.050)	(-1.059)				
Stock Volatility			0.395	0.391				
			(0.365)	(0.362)				
Bog Index					0.002**	0.002**		
					(2.310)	(2.299)		
Gunning Fog Index					-0.006	-0.006		
					(-1.226)	(-1.222)		
Big4							0.018	0.019
							(0.592)	(0.624)
Auditor Change							0.046	0.045
							(1.308)	(1.311)
ICMW							0.039	0.040
							(0.884)	(0.893)
Standard Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,919	7,919	7,224	7,224	7,774	7,774	4,352	4,352
Pseudo R^2	0.395	0.395	0.388	0.388	0.396	0.396	0.399	0.399

Notes: This table presents some robustness tests using alternative model specifications including additional control variables. Columns (1) - (8) present average marginal effects (AMEs), and the respective Z-statistics in parentheses. All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Table 12
Robustness Test: Alternative Samples

	(1)	(2)	(3)	(4)
	Rating = 1		*Investment Grade* = 1	
	Private	*Private*	*Private*	*Private*
Acct_Inconsistency	0.255*		0.435**	
	(1.871)		(2.137)	
Disc_Inconsistency		0.243*		0.411**
		(1.760)		(1.997)
Stnd_Inconsistency		0.645		1.187
		(0.883)		(0.934)
Econ_Inconsistency	0.152	0.152	0.067	0.066
	(1.629)	(1.625)	(0.441)	(0.436)
Size	-0.068***	-0.068***	-0.091***	-0.092***
	(-7.422)	(-7.438)	(-6.359)	(-6.379)
MTB	-0.006**	-0.006**	-0.002	-0.002
	(-2.497)	(-2.520)	(-0.319)	(-0.324)
Default Risk	0.104***	0.104***	-0.289**	-0.296**
	(8.412)	(8.420)	(-2.282)	(-2.330)
Tangibility	-0.148***	-0.150***	-0.273***	-0.276***
	(-2.764)	(-2.809)	(-2.957)	(-3.000)
Leverage	0.195***	0.197***	0.044	0.045
	(3.121)	(3.159)	(0.296)	(0.297)
Capital Markets Access	-0.037	-0.037	-0.031	-0.033
	(-1.429)	(-1.445)	(-0.612)	(-0.644)
Disc_Accruals	0.335	0.328	0.516	0.503
	(1.444)	(1.422)	(1.276)	(1.250)
Acquisition	-0.004	-0.003	-0.015	-0.015
	(-0.236)	(-0.219)	(-0.641)	(-0.618)
# of Analysts	-0.033**	-0.033**	-0.014	-0.013
	(-2.205)	(-2.185)	(-0.532)	(-0.482)
10K Length	-0.004	-0.004	-0.009	-0.009
	(-0.230)	(-0.243)	(-0.315)	(-0.338)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	4,216	4,216	2,273	2,273
Pseudo R^2	0.275	0.275	0.168	0.168

Notes: This table presents the results of a robustness test using alternative samples of debt issues. Columns (1) and (2) present average marginal effects (AMEs), and the respective z-statistics in parentheses for Probit models estimated using a sample of debt issues from firms with a credit rating (i.e., *Rating* = 1). Columns (3) and (4) present average marginal effects (AMEs), and the respective z-statistics in parentheses for Probit models estimated using a sample of debt issues from investment-grade firms (i.e., *Investment Grade* = 1). All variables are defined in Appendix A. All continuous variables are winsorized at their 1st and 99th percentiles. Standard errors are clustered by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively based on two-tailed tests.

Vita

Fellipe Gomes Raymundo was born in Nova Iguaçu, Rio de Janeiro, Brazil. He earned his Bachelor's degree in Economics from Ibmec RJ in Brazil and his Master's degree in Economics from the University of Arkansas, Fayetteville. Fellipe worked as an equity research analyst at JGP, one of Brazil's top five independent asset management firms, and later as the head of the equity research team and as a co-portfolio manager at Appia Capital. His job involved using corporate financial statements to build equity valuation models and to provide input about fund holdings. He joined the Ph.D. program in Accounting at the University of Tennessee, Knoxville in 2016 with research interests in financial accounting, capital markets, institutional investors, and corporate governance. Fellipe is excited to begin his career as a tenure-track assistant professor in the William Dillard Department of Accounting at the University of Arkansas, Fayetteville.